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ABSTRACT

This paper discusses the nature and extent of student drug use, its meaning and significance, society's response to it, and some of the problems resulting from efforts to control it. Drugs are any substance which by its chemical nature affects the structure or function of the living organism. Abuse refers to any use of a non-medically approved drug or of a medically approved drug for non-medically approved purposes. The greatest increase in drug usage is in the use of mood changing drugs, particularly marihuana. Many of the reasons young people use drugs are the same as the reasons for adults using drugs: for fun, to facilitate interaction (social), to feel better, and to relieve boredom. The effects of drugs are varied depending on sex, age, state of health, and individual differences. Whether the outcomes or reactions are good or bad is a value judgment. Much research is needed for more information on drugs and their use. Limiting the supply of a particular drug does not decrease drug use, but rather causes the user to look for another drug. Drug education is badly needed. Furthermore, instead of treating the problem, we are attempting to regulate the symptoms. Perhaps more care in dealing with basic problems or at least identifying these problems will help solve today's drug problems. (KJ)

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STUDENT DRUG USE[1]

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Student drug use is a highly emotional topic for virtually everyone. For an increasing number of people "student" arouses bewilderment, frustration, even anger, and "drug" adds a measure of panic, fear, revulsion, and indignation. Together they provide a climate which is not conducive to clear thinking and to constructive action.

What I would like to do this afternoon is to share with you some of the experiences I have had during the past three years as a psychologist, an educator, and an erstwhile psychopharmacologist who has been concerned with all aspects of this complex problem. I have managed to become involved with students who use a wide variety of drugs in a variety of ways and for a variety of reasons, with students who do not use drugs, with scientists from biochemists to sociologists, with professionals from medicine and education and the mass media, with judges, with lawyers, with legislators, and with enforcement personnel, as well as with diverse segments of the general public.

I hope that many of you will not be disappointed that we will be discussing only incidentally the prevalence of student drug use, the kinds of drugs they use, and the outcomes of drug use. There are others who can do this better than I. In this connection I would strongly recommend that anyone who is concerned with any aspect of student drug use become familiar with both the methodology and the conclusions of Blum (1969) and his associates in his two important recently published volumes, Society and Drugs and Students and Drugs. My own role has been that of psychologist analyzing the problem, interpreting the research of others, assessing the current state of our knowledge and relating it to what is considered by many to be one of society's major problems* At least a dozen bills related to drug use and abuse have been introduced in the current session of Congress.

Although I shall be discussing one particular problem I would like to suggest that it is a prototype for many other problems which involve individuals and groups of individuals, society's response to some of the things they do, and psychology's role in contributing to the understanding of these problems and, hopefully, to their solution. I would also suggest that without being aware of it or without intending to do so, many of us actually contribute to these problems simply by the way we report our research. Once was the time when we could talk only to each other and we developed a special elliptical discourse which, in most instances, communicated effectively and efficiently. We no longer talk only to each other and our discourse--jargon for others--with all of its implicit assumptions is getting us into trouble. Our so-called conclusions are spread abroad by and to people who do not understand sampling and correlation and experimental controls and significance of difference and the prevalence of error, who do not read or understand our operational definitions, our null hypotheses, or the limited validity and reliability of our measures. They surround every word we use with their own apperceptive mass.

*(Nowlis, 1969)

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The current "drug problem" is an excellent example of what can happen. One scientist reports chromosome breakage in a "significant" number of white blood cells as a result of adding LSD to blood samples in a test tube and the word spreads across the nation and reverberates in the halls of Congress that LSD is threatening future generations. I am not at all sure how we can cope with this problem but it might be helpful if each of us reread his Summary and Conclusions as if he were John Doe and perhaps added a "may" or an "in some cases," hopefully specified. We may even have to include a new final paragraph, "Cautions." It may not enhance one's ego or one's pleasure over significance at the P=.01 level of confidence, but it certainly would help in educating non-scientists in the proper use of scientific information. The real challenge is to do this for individuals who are seeking simple yes-or-no answers to complex questions; and to do it without stretching their tolerance for complexity and uncertainty to the point where they ignore us completely.

"Student drug use" has been widely interpreted as the "spread of narcotic addiction from the ghetto to our middle class and suburban youth," a "threat to the future of our society." In the wake of this increasingly widely held feeling it is almost impossible to discuss student drug use objectively. In the face of society's decision to consider much of this drug use criminal it is difficult even to study it. In estimating incidence of use, of adverse effects, of any drug-related phenomenon we have many numerators but virtually no reliable denominators. The challenges involved in persuading students that their admission to having committed a felony will be confidential and, indeed, in being able to guarantee that confidentiality are sometimes great.

Within the limits of the time available I would like to discuss the nature and extent of student drug use, its meanings and significance, society's response to it, and some of the problems resulting from efforts to control it. But before we do this we must define some terms lest we add to, rather than reduce, the confusion and controversy which exists.

The first term we must define is "drug." In our society there are too widely accepted definitions of "drug" and both of these contain many implicit assumptions. One defines drug as a chemical useful in the art and practice of medicine; the other defines drug as a "narcotic" with narcotic defined, not pharmacologically or medically, but as a socially disapproved substance or an otherwise approved substance used for socially disapproved reasons. Many problems result from definitions based on the purpose for which a drug is used. For example, there is the fact that one and the same substance may be a medicine under one circumstance and a "narcotic" under another or not even a drug under still another. Second, there is a great temptation to study one type of drug or drug use out of the context of all drugs. Third, there is a tendency to assume that the use of all drugs which fall under one definition has the same significance and the same effects. The use of heroin as a model for all drugs labeled "narcotic" is a case in point. This has led to complete confusion in the design and interpretation of surveys of student drug use. One investigator will define "drug use" as use of any drugs without the advice or supervision of a physician, another will define it as use of specific socially disapproved drugs, with the list varying from survey to survey, and at least one has defined it as use of a wide span of drugs, including social drugs such as alcohol and tobacco, home remedies, painkillers, prescription drugs, over-the-counter drugs, as well as exotic and illicit drugs. Only the latter is in any real sense a survey of student drug use. You will note that I have carefully avoided the word <u>abuse</u>. We will come to that later.

What is needed is a definition of drug which is objective and descriptive and does not have within it a variety of implicit value judgments which are the source of much of the confusion and controversy which abounds in discussions of drugs and drug use. The basic pharmacological definition of drug as any substance which by its chemical nature affects the structure or function of the living organism is about as descriptive and objective as one can be. This definition includes a wide range of substances. It also includes a wide range of substances which we do not ordinarily call drugs, such as beverage alcohol and caffeine, nicotine, agricultural, industrial, and household chemicals, pollutants, even food. For many purposes this is too broad a definition but it forms a base from which we can select groups of drugs and it forces us to make explicit the basis on which we make a given classification. Hopefully it reminds us that a drug is a drug and the principles by which it interacts with the living organism are the same whether we call it a medicine, a "narcotic," or by some other name.

The other term which we must define is "use." Again, there are certain advantages in starting from a descriptive and objective base. Use is often defined in terms of frequency, as ever having tried, occasional, regular, or excessive. But even these terms leave plenty of room for value judgments. It is necessary to specify each in terms of actual frequency of use over specified time. Whatever one's definition of excessive, it is then at least explicit.

This is perhaps the point at which we should consider abuse and to recognize that, as currently used, both socially and legally, it has little correspondence to use as I have defined it. In other contexts and even for our national drug, alcohol, abuse is defined as a pattern of use which interferes with the psychological, social, academic or vocational functioning of a given individual. As far as many other drugs are involved, if we call them drugs, abuse is legally defined as any use of a non-medically approved drug or of a medically approved drug for non-medically approved purposes. Our efforts to justify and support this as abuse in terms of "effects" of drugs so used are one of the main factors in the current controversy over drugs. When research indicating that monosodium glutamate injected peritoneally into pregnant mice produces offspring with neural damage, ataxia, obesity, and sterility (Olney, 1969), is presented as evidence that it is dangerous and should not be added to baby food, eminent experts testify that this is irrelevant because it "has no relationship to the amount of MSG consumed conventionally nor does it have any relationship to the usual rate of entry into the body." (White, 1969) When the same type of evidence is presented for LSD it is used as at least partial grounds for labeling LSD society's most dangerous drug, placing it in a category with heroin, and singling it out for the severest criminal penalties. I am not making a case for LSD. I am merely pointing out that we change the rules to suit our purposes and are inviting controversy and charges of hypocrisy.

With all of these qualifications and with the recognition that we have no research from which we can confidently generalize to all students, what can we say about student drug use? Most students use drugs. In Blum's 1967 survey (Blum, 1969) of a random sample of approximately 200 students from each of five different West coast colleges and universities, from 68% to 81% had used tobacco one or more times, from 89% to 97% had used alcohol, from 11% to 32% had used amphetamines, from 18% to 31% had used sedatives, from 11% to 28% had used tranquilizers, from 10% to 33% had used marihuana, form 2% to 9% had used any of a variety of hallucinogens, and from 1% to 2% had used a variety of narcotics and pain killers. Lest you forget, let me remind you that these percentages represent reports of having used once or more. It includes both legal and illegal use for most drugs. A follow-up survey in 1968 on marihuana

use in the school which had shown 21% marihuana use in the initial survey showed 57% marihuana use. Reports of regular use had increased from 4% to 14%. The rate of hallucinogen experience had increased from 6% to perhaps as high as 17%. Opium use (not heroin) was estimated to have increased from 1% to 10%. Again, a word of caution. We know on the basis of a variety of surveys of institutions around the country that use of illicit drugs varies from institution to institution and from area to area. We also know that the West coast tends to be a relatively high use area. Even here, it is a small minority of students who are involved in regular use of marihuana or hallucinogens, with regular use defined as more than once a week but less than daily.

There are two surveys in the planning stage which should provide us with more adequate data on which to base generalizations. One will involve a sample of 200 colleges of varying sizes and locations, hopefully with a follow-up after two years. The other will involve a sample of high schools together with their feeder junior high schools in a four-year longitudinal study.

Estimates currently made by Dr. Stanley Yolles (1969), Director of the National Institute of Mental Health on the basis of results of a majority of studies which have been done throughout the country, are that from 20% to 40% of high-school and college students have tried marihuana at least once. Of these about 65% are experimenting (one to ten times and then discontinuing use), 25% are social users, smoking on occasion when it is available, and 10% of those who have tried at least once use regularly, with regular defined as devoting a significant portion of their time to obtaining and using the drug. This would mean that somewhere between two and four per cent of students are regular users. This would seem to bear little relationship to statements by prominent people headlined in the news media that one out of ten students is "hooked" on marihuana.

NIMH (Yolles, 1969) also estimates that the use of LSD, even in relatively high-use areas is low, with probably not more than five percent ever having tried, and an even smaller percentage countrywide.

There can be little doubt that use of illicit drugs is increasing and that use is spreading both up and down the age scale. In recent years it has begun to appear at the junior high and elementary school levels. A large number of middle-class adults are believed to be using marihuana. We do not have and probably will not have good data on this group (or any group) as long as possession of marihuana is a felony. In all cases it is the spread of marihuana use which is predominant. The fact that there is increasing use of a mood-changing drug should not surprise us. Mood-changing drugs are the largest single type of drug used, even in prescriptions. The thing which is significant is that marihuana is a drug which carries the heaviest criminal penalties and a degree of social disapproval equivalent to that of heroin to most people.

The reasons for non-medical drug use are predominantly the same reasons for which man has used drugs throughout the ages, to relieve pain, to allay anxiety, to produce euphoria, and to modify experience, perception, and thought. It is tempting to speculate that modern man's increased use of mood and mind-altering substances is at least in part an indication that modern man has more pain, more anxiety, less euphoria, and less satisfying experiences, but this is the kind of speculation that has gotten us into trouble. Many of the reasons that young people use drugs are in large measure the reasons that adults use drugs, for fun, to facilitate social interaction, to feel better, to relieve boredom, to escape from problems, even

to protest a little. The main difference is that most adults get their stimulants and sedatives and tranquilizers legally from physicians and their social drug, alcohol, is legal. Their tension, anxiety, fatigue, and depression are judged to be legitimate consequences of their full participation in pursuit of socially approved social and economic goals or values. That the outcomes of their drug use are not always good is attested to be the fact that an increasing number of hospital admissions are directly attributable to drug-related illness and that we have from six to nine million alcoholics, depending on how one defines alcoholic.

Please note the use of outcomes of drug use rather than drug effects. The concept of drug effect is an example of a term which may be used to communicate effectively among scientists who understand how drugs act, that the "effect" of any drug is a function of dose level, route of administration, and many non-drug factors, and that drugs do not have within them the power to produce a specifiable and reliable effect. The average layman with his "magic-potion-notion" of drug does not understand that we are really involved in a numbers game. For example, the effective dose (ED50) of any drug is that dosage level or amount of the drug by which, not at which, fifty percent of a given population show whatever effect is desired, among many others. The official toxic dose is TD50 and depends on how one defines toxic. Even the lethal dose (LD50) is that dosage level by which fifty percent of a group of animals die under specified conditions. The lethal dose may vary with the termperature under which the animals are kept and with whether they are housed singly or in large groups. The reason for this numbers game is that the "effect" of many drugs is largely a function of many non-drug factors.

"The effect" of any drug is a myth. All drugs have multiple effects. No effects are completely reliable or predictable. All drugs are chemicals which are absorbed into the blood stream and interact with the complex, delicately balanced biochemical system that is the living organism. It is a system which varies from individual to individual and from time to time in the same individual. It varies with age. It varies with sex. It varies in sickness and health. One needs only to read the counterindications and the list of idiosyncratic reactions and side effects the "diseases of medical progress," in the advertisement of drugs in medical and scientific journals to be aware of the complexity of factors influencing the effects of a drug. Effects also vary with psychological characteristics of the individual, with his expectations, and with the setting in which the drug is taken or administered. "Outcomes of" or "reactions to" use of a drug at least put the organism, physiologically and psychologically defined, into the picture and leave room for discrimination among patterns and circumstances of use.

Whether outcomes or reactions are good or bad is a value judgment. In some cases there is general agreement, in others, violent disagreement. The widely hailed outcome of treating mentally disturbed patients with the major tranquilizers, i.e., "emptying our mental hospitals," is considered by at least one prominent psychiatrist to be the equivalent of putting the patient in a chemical straightjacket and depriving him of his right to attempt to solve his problems. The methadone treatment for heroin addiction is regarded by many, including some addicts, as a bright hope and by others as no treatment at all and as outright immoral because it substitutes dependency on one drug for dependency on another. It is just a matter of values, to be dependent or to be free of supporting one's habit on the black market. There is bitter disagreement within the medical profession as to the propriety and effectiveness of the use of LSD in therapy.

Somewhat guardedly, Blum concludes from his data, "It is clear . . . that a variety of unpleasant outcomes can occur but one gets the impression that very few suffer anything demaging over the long run. Thus, one can conclude, as we do, that anything but acute toxic ill effects are unlikely and that illicit-exotic drugs when used as students are now doing, for the most part, do not seem to pose serious hazards to school performance or to health." (Blum, 1969, p. 378) He hastens to point out, and properly, that his sample did not include any information on students who had dropped out of school and that those who remained and were studied were a select group. He also points out that his data give no indication of the possible outcomes of long-term low-dosage use.

Yolles (1969) reports from NIMH that the incidence of serious adverse reaction to marihuana use appears to be low but also points out that as the total number of users increases the number experiencing adverse reaction will increase, that the effects of the drug on judgment and perception might very well be a factor in automobile accidents, and that users with significant psychiatric problems might avoid seeking psychiatric treatment as a result of this form of "self-medication." There are no adequate research data to support the latter statements.

Both of these statements function as projective tests. Those who, because of their personal beliefs, attitudes, and values, believe that illicit drugs are by definition "bad" and that illicit drug use can bring nothing but harm to the individual and to society will dismiss the data and seize on the questions raised by limitations of research design or the absence of research results. Those who hold the other view will seize on the data and dismiss the questions. Those who attempt to be objective will advise caution until we have more data based on research. The irony is that more research will probably leave us with essentially the same dilemma. Such is the nature of drug, of drug action and of complex human behavior.

I cannot conceive of a research design that could provide the definitive answers the public wants. The number of and interactions among the independent variables involved in, for instance, the driving performance of individuals who have used marihuana is staggering. Administering marihuana of known composition in known amounts in a double blind situation in the laboratory to naive subjects of equivalent driving skill as measured on a simulator will tell us very little about the driving performance of individuals who, for a variety of reasons, have chosen to use an unknown amount of an illegal drug of unknown strength and purity obtainable only on the black market, who have expectations and varying amounts of experience as to the "effects" of that drug, who choose to drive cars of varying type and condition under road conditions at some time after having used some amount of the drug, and have had varying degrees of experience in coping with whatever reactions they as individuals experience when they "use marihuana."

We do need laboratory research on all drugs. We need to know the ways in which they modify the biochemical and neurochemical organism. But beyond this we need to know how these changes are related to changes in behavior. This is the greater challenge. In the meantime, differences "significantly greater than chance" in situations where so many important independent variables have been controlled will not provide us with the answer to social problems, especially when they are used inappropriately by people grasping at anything that seems to support what they believe about drugs which have historically been labeled "bad," "dangerous," or "evil."

The use of virtually all drugs involves adverse reactions or bad outcomes, including death or, in some cases, life imprisonment, at some dosage level in some people under some circumstances. This includes aspirin, smallpox vaccine, penicillin, alcohol, nicotine, barbiturates, amphetamines, as well as heroin, LSD, and marihuana. In this regard it is of interest that, to my knowledge, there are no verified deaths directly attributable to either LSD or marihuana as pharmacological agents except one elephant. Official records show approximately 185 deaths per year from aspirin.

As we turn to the meaning and significance of student drug use, society's response to it, and efforts to control it, I want to make it very clear that I am speaking as one psychologist who is acutely aware of the fact that background, training, and experience, beliefs, attitudes, and values, even basic beliefs about the nature of man, are important factors in any analysis and assessment of these phenomena. One always hopes that awareness inspires caution. My only special qualifications to comment on this social problem are that, because of commitments entered into almost adventitiously, I have been forced to look at student drug use from almost every possible point of view and have had the privilege of interacting with many representatives of disciplines and professions who espouse these many points of view, including students of all shades of opinion and involvement.

If one wants to understand drug effect and drug use one must look, not solely at the pharmacological agent, but at the person who chooses to use drugs, how much he uses when and where and how, what he expects, wants, or believes will result from that use. We are learning to our dismay that to try to control drug use by limiting the supply of the particular drug used does not decrease drug use in general. Many users merely turn to another substance which may involve even more risk. And in our society drugs are everywhere, legal drugs, illegal drugs, and substances which we do not call drugs.

In addition, we have mounted a gigantic campaign to persuade the public that there is a drug for every ill or misery--anxiety, depression, tension, and the physical symptoms associated with these, irritability, fatigue, lack of success in business, in social life, in the family. If there is not a chemical cure, there soon will be. This has rocketed the pharmaceutical industry to the number-one profit-making industry in the country, passing the automobile industry in 1967. All of this, of course, has to do with the promotion of legal drugs, both prescription and over-the-counter drugs, obtained through legal means. But I seem to remember learning in introductory psychology about a principle known as generalization. It should not surprise us that young people do not understand why we are so excited about their use of drugs for their miseries and ills. It is also relevant to note that there has been an almost equally vigorous campaign in behalf of their drugs via the news reporting of the drug scene. It has been suggested that the chemical most responsible for the current drug scene is printer's ink. Just because most of us who are over thirty do not ordinarily seek adventure, new experience, insight into one's self, independence, and have either found or given up looking for new insights, meaningful social relationships, creative expression, even a dash of rebellion against the restrictions that we accept as inevitable in a modern technological society, and a pinch of fun, we should not underestimate the appeal to the young of anything which promises any or all of these, regardless of whether those promises can be fulfilled. This particular characteristic of many drugs does not seem to deter many of us from seeking what is promised. In addition, we have learned that many drugs are much more effective if we believe that they will be and the "sugar pills" have cured great ills and produced profound negative effects. One physician has been

reported to have said somewhat facetiously, "Whenever a new drug comes on the market, rush to your physician while both he and you still believe in its powers."

It is almost trite to point out to an audience of psychologists that drug use serves different functions for different individuals. Despite this, "Escape to Nowhere" has become the banner for numerous efforts to dissuade everyone from any use of certain drugs. It is astounding to note how often mere use of illicit drugs is taken as an indication that the user needs psychiatric treatment. This would seem to be, in part, the result of our concept of drug abuse as a disease and our definition of any use of illegal drugs as abuse. We seem to assume both that drugs are to cure illness and that if one takes drugs he is, almost by definition, ill. There is no doubt that some young people use drugs to escape from pressure, from anxiety, from impulses which threaten them, from the stresses and strains of growing up. There is also no doubt that some people who are ill use drugs. But unless one defines doing anything that is not socially approved as illness, the great majority of young people who use drugs illegally are not ill and are not in need of psychiatric treatment. Many use them because they think it is fun. Many try them out of curiosity. Many use marihuana much as we use alcohol to facilitate social interaction. Some use them as occasional respite from the pressures of increasing academic demands.

Fun, curiosity, social interaction, change of pace are all rather normal motivations. There are many ways to satisfy them. The important question is why increasing numbers of students are choosing to risk severe legal penalties by choosing to use illegal drugs. It could have something to do with society's response to their use of drugs or, perhaps more important, society's response to young people.

The very small minority of students who use illegal drugs regularly and who devote a considerable portion of their time to obtaining drugs, to using them, and to talking about their drug experiences are also a varied group. Many of them are bright enough and well enough put together to manage their drug use and still fulfill their academic obligations. Others are not. Some are convinced that drugs will solve any of a variety of problems, some developmental and some pathological. Some are sick. Again we should ask the question, "Why illegal drugs?"

Society's undiscriminating response to all student drug use has been emotional and extremely punitive. It is outraged at many of the things some young people are doing and saying these days. There are those who would pass laws against them and even some who would shoot a few students in the belief that that would serve as a deterrent. If one watches the faces of those who suggest the latter, one gets the impression that shooting students might also serve to reduce their anger and frustration. But there are calmer voices to be heard and as yet the more violent reactions have been held in check in most cases. But the drug issue is different. For a great variety of historical and cultural reasons we have carefully nurtured attitudes, beliefs, and stereotypes about all drugs which are outside of medicine or used for non-medical reasons. Beginning with the Harrison Narcotic Act we have forged a system of criminal penalties, including mandatory jail sentences, denial of probation and parole, for possession and "sale" (to sell is legally defined as to sell, to give, or otherwise to dispose) of "narcotics" which would suggest that these were greater than any crimes other than treason or first degree murder. I would suggust the hypothesis that the drug issue may represent a rallying point for frustration, resentment, and anger generated by many

things that young people are saying and doing and that the existing drug laws and the attitudes which support them are rough and ready weapons for retaliation. Many are quick to blame drugs for everything from dropping out, criticizing, and protesting to violence and crime on the streets. If drugs are to blame we can concentrate on controlling them and look no further. Historically non-medical drug use has been associated primarily with minority groups and, with the persistent "magic-potion-notion" of drugs, drug use has been a convenient scapegoat and a ready target for agression against these groups. Students are our fastest growing and increasingly vocal minority.

Estimates of the number of persons in the United States who have used marihuana vary from 8 million to 20 million. NIMH (Yolles, 1969) considers that 8 million is a conservative estimate and that there may be 12 million. All of these people are criminals since they have committed a felony. They possessed marihuana. Psychology has something to say about the effects of labeling. Psychology and common sense certainly have something to say about punishment as a deterrent when the chances of being punished are somewhere between one in five hundred and one in a thousand. But it either is not being said or is not being heard.

Because of these laws, because of the nature of the law enforcement approach the control of drug use, and because of the persistent attitudes and beliefs which support that approach, the drug issue has also become a target and a rallying point for many young people's frustration, resentment, and charges of hypocrisy against a society which promotes the use of alcohol, is unwilling even to require the registration of guns, and seems unwilling to regulate much behavior which results in thousands of deaths and injuries.

The other major approach to control of illegal drug use is that of education. I use the word reluctantly because most socalled drug education has until very recently consisted of preaching and of attempts to scare with statements which are inaccurate and often patently false. Much of it still does. It seems to be designed to preserve and justify our attitudes and beliefs and our laws. It obviously has not reduced illegal drug use. Some of it may even have instigated use.

Drug education is desparately needed. Students need it. Parents need it. Legislators need it. Physicians need it. The general public needs it. We are living in an increasingly chemically dominated environment. Drugs are an important part of that chemical environment. One of our most urgent social problems is to learn to live wisely in that environment but we cannot learn as long as we do not understand what drugs are and how they act, what risks are involved in all drug use, and how these risks can be minimized. We also need to expand our concept of drug to include the many substances which by their chemical nature affect the structure and function of the living organism.

To do honest and sound and effective drug education we will need all of our skills in communication and persuasion. We will have to change long-held beliefs and attitudes about drugs. We will have to separate the problem of drugs as pharmacological agents from the problem of people who make value judgments about drugs, about "drug effects," about the reasons for using drugs, and about people who use drugs. The <u>people</u> problem will be the more difficult to solve but a solution to the <u>drug</u> problem should make it easier.

I would like to close by addressing myself particularly to Division 7, the division of our Association which is primarily concerned with growth and development from infancy to adulthood. The problem of student drug use is extremely complex. It has very little to do with drugs as pharmacological agents. At the core of it is a phenomenon which has realtively recently been created by our society primarily in the interest of technological and economic development. It has recently been intensified by the arrival of the baby boom at college age. This phenomenon is that of increasingly prolonged adolescence. Having created it we generally choose to pretend that it does not exist.

"Nonadulthood" has been stretched five to ten years beyond physiological maturity. It has been stretched farthest for the brightest and most talented. Our young people between the ages of sixteen and twenty-five are our fastest growing minority, a minority which has very little power and influence even on their own destinies. In other times they would have been married and dutifully, even happily, contributing to the gross national product or being "liberally educated" while waiting to assume positions which had been prepared frr them.

Our failure to integrate today's young people into society, to give them any significant role except to fight our wars, to provide them with a realistic arena in which to accomplish the tasks of adolescence, however you wish to define them, to examine these tasks in the light of the world in which we now live, has left them largely to their own devices. We tend to react violently against many of these.

All is not well with many of our young people And we are not facing the very difficult problems involved in understanding and dealing with the process of becoming an adult in a rapidly changing and highly technological society. No society will flourish whose institutions--family, religion, education, business, government--do not effectively challenge substantial numbers of its most gifted young people to grow, to use their talents in constructive and satisfying ways, to develop a sense of worth and accomplishment, to develop meaningful and humane social relationships, to feel that they have an increasing role in the control of their destines and some influence on the society in which they must live, work, play, establish a home and raise a family, eventually assume responsibility for that society and its problems.

Instead of facing basic problems we are lashing out at symptoms, at drug use, at protest, at dropping out, at manner and dress and language, and are feeling satisfaction and relief at doing "something." Much of what we are doing is at best keeping us from dealing with the basic problems and at worse intensifying those problems. As pointed out by Barber (1967) and many others, social policy is itself one of the major determinants of the nature and severity of a social problem, particularly the "drug problem."

Perhaps we should be among the first to accept George Miller's advice in his Presidential Address (1969) and spread the word that young people are not basically bad and need not be coerced into work and responsibility. Given half a chance they will grow and develop and make wise decisions, but only if we expect that they will and provide the freedom and opportunity to learn to do so.

References

Barber, B. Drugs and Society. New York: Russell Sage Foundation, 1967.

Blum, R. H. & Associates. Drugs. Volume I. Society and Drugs: Volume II. Student and Drugs. San Francisco: Jossey-Bass, 1969.

Miller, G. A. Presidential Address, American Psychological Association, Washington, D. C. September 1, 1969

Nowlis, H. H. Drugs on the College Campus. New York: Doubleday & Co., 1969.

Olney, J. W. Brain lesions, obesity, and other disturbances in mice treated with monosodium glutamate. Science, 1969, 163, 719-721.

White, P. L. Testimony before Select Committee on Nutrition and Human Needs, U. S. Senate, 1969. Quoted in A. P. Washington dispatch July 18, 1969.

Yolles, S. F. Statement before Subcommittee on Alcoholism and Narcotics, Committee on Labor and Public Welfare, U. S. Senate. August 6, 1969.